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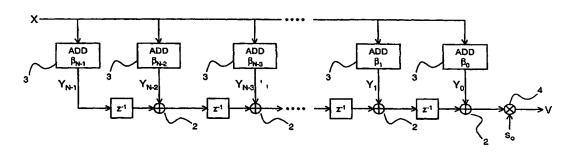
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(54) Title: METHOD FOR DETERMINING FILTER COEFFICIENTS OF A DIGITAL FILTER AND DIGITAL FILTER



(57) Abstract: In a method for determining filter coefficients of a digital filter, particularly in UMTS, the predetermined filter coefficients by are divided by a same scaling factor s and then quantized in that counted from the most significant bit onwards only a certain number n of "1" bits is used and in that the quantization error E(s) is minimized by the selection of the scaling factor s0 and these scaled and quantized filter coefficients Bv are implemented in the filter.



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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{H03H} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS	CONSIDERED	TO	BE RE	LEVAN	T

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 766 388 A (SAMSUNG ELECTRONICS CO LTD) 2 April 1997 (1997-04-02) abstract page 2, line 19 - line 38 page 6, line 26 - line 31 page 6, line 54 -page 8, line 5; figures 2,3 page 9, line 24 -page 10, line 12; figure 6	1-10
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Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.
 Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed 	 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search 21 January 2004	Date of mailing of the international search report 28/01/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Trafidlo, R



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Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HENRY SAMUELI: "An Improved Search Algorithm for the Design of Multiplierless FIR Filters with Powers-of-Two Coefficients" IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS, vol. 36, no. 7, 1 July 1989 (1989-07-01), pages 1044-1047, XP000054038 New York, US page 1045, left-hand column page 1046, left-hand column column	1-4,7-9
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